

Health Consultation

Draft Proposed Plan
Palermo Wellfield Superfund Site
Tumwater, Washington

CERCLIS NO. WAD00000026534

May 19, 1999

Prepared by
The Washington State Department of Health
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry



FOREWORD

The Washington State Department of Health (DOH) has prepared this Health Consultation in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is part of the U.S. Department of Health and Human Services and is the principal federal public health agency responsible for health issues related to hazardous waste. This Health Consultation was prepared in accordance with methodologies and guidelines developed by ATSDR.

A health consultation provides advice on specific public health issues which may arise as a result of an actual or potential human exposure to a hazardous substance. Health consultations provide a means for DOH to respond quickly to a request for health information on hazardous substances and to make recommendations for actions to protect public health. DOH evaluates available information about hazardous substances at a site, determines whether exposures have occurred or could occur, and reports the potential harmful effects from exposure.

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BACKGROUND AND STATEMENT OF ISSUES

The U.S. Environmental Protection Agency (EPA) Region 10 asked the Washington State Department of Health (DOH) to review and comment on the draft Proposed Plan for the Palermo Wellfield Superfund Site (WAD 0000026534). This health consultation presents DOH's comments on the Proposed Plan. DOH previously commented on the draft Remedial Investigation/Feasibility Study reports in a letter dated March 31, 1999.

The Palermo Wellfield site in Tumwater, Washington includes six production wells that provide approximately 50 percent of the domestic water supply for the city. The wellfield is located in the Palermo Valley neighborhood, approximately ½ mile east-northeast of the Trosper Road interchange on Interstate Highway 5.

Routine sampling conducted for the city in 1993 detected the volatile organic compound trichloroethene (TCE) in three of the wells at concentrations ranging from 1.1 to 12.6 micrograms per liter. As a result, the three affected wells were taken out of service and replaced with two new drinking water wells at another location. The three wells were put back into service in March 1999 after EPA completed construction of an air stripping system to remove contaminants from the affected wells. Water from the three wells is currently blended with water from the unaffected wells.

Further investigation (after the initial TCE detections) led to the discovery of two narrow groundwater plumes of TCE and tetrachloroethene (PCE) extending roughly eastward, toward the wellfield. Groundwater poses a risk only to potential future groundwater users upgradient of the wellfield, where the groundwater is not being treated. The investigations also revealed the presence of TCE and PCE in soils beneath the site, although estimated risks were below a level of health concern for a hypothetical construction or commercial worker, and for an on-site resident assumed to ingest the contaminated soil. However, the soils are paved throughout this portion of the site and will likely remain so for the foreseeable future. The highest human health risk was determined to be from inhalation of PCE and TCE vapors in indoor air from volatilization of crawl space standing water. A model was used to predict the concentrations of TCE and PCE in residential indoor air using concentrations detected in surface water at the residences. The model predicted that inhalation of these contaminants presents an unacceptable increased cancer risk, and was the basis of the proposed alternative for surface water.

The draft Proposed Plan summarizes EPA's recommendations for cleaning up soil, groundwater, and surface water contaminated with PCE and TCE at the site. The following section describes the objectives of the Proposed Plan.

DISCUSSION

The findings of the Remedial Investigation/Feasibility Study reports (RI/FS) provided the basis for the alternatives outlined in the Proposed Plan. The objectives of the RI/FS were to determine the nature and extent of contamination at the site, and to evaluate alternatives to address actual or potential health threats identified. The Proposed Plan provides a brief background on the Palermo Wellfield site, describes the alternatives evaluated, and identifies EPA's preferred alternatives. After the initial interagency review, EPA will provide a formal thirty-day public review period. Based upon new information or public comment, EPA may select another alternative presented in the Proposed Plan. The final action will be described in the Record of Decision, which will include EPA's response to comments.

CONCLUSIONS

The alternatives identified in the draft Proposed Plan appear to address all significant human health concerns identified in the RI report. DOH believes that the consideration/inclusion of comments provided below, although not crucial to the Plan's implementation, will provide the reader with a clearer understanding of the cleanup goals and objectives.

RECOMMENDATIONS

Following is a summary of DOH's recommendations on the draft Proposed Plan:

1. P. 1, *Introduction*: Recommend changing "should be consulted" to "can be consulted".
2. P. 1, *Site Background*: Delete the words "In March 1999" at the beginning of the sentence. This is already stated later in the sentence.
3. P.3, 3rd paragraph, *Potential Risks to Human Health*: Under future risk scenarios evaluated, recommend including air.
4. P. 3, *Potential Risks to Human Health*, last paragraph: Recommend adding the words "exposed for 30 years, averaged over a 70 year lifetime" at the end of the last sentence. Also suggest indicating that no non-cancer risks were found to result from exposure to PCE in indoor air, if that was the case.
5. P. 3, *Cleanup Objectives*, first bullet: Recommend indicating which standards are being referred to (i.e.-MCL, MTCA B).
6. P.3, *Cleanup Objectives*, last bullet: Indicate why effects on the Ecology are included here if it was stated previously that "No contaminants were identified in the groundwater that would affect fish or other aquatic life." This appears to be a contradiction, and may confuse the reader.

7. P. 5, *Groundwater*: Recommend providing an estimated timeframe for cleanup objectives, if possible, for groundwater cleanup (i.e., 1, 10, 30, years?).
8. P.5, *Soil*: Recommend stating the cleanup level goals and estimated timeframes for cleanup.
9. P. 5, *Surface Water*: Recommend adding a sentence about the potential for exposure to PCE and TCE air emissions at the lagoon (or state that no residual contamination is expected by the time the treated water reaches the lagoon).
10. P. 5, *EPA's Preferred Alternatives*, last bullet: Consider including a statement about the frequency of monitoring. Also recommend adding a statement about confirmation monitoring in residential indoor air after installation and operation of the French drain, to assure that the selected remedy is obtaining the cleanup objectives.
11. P. 6, Table 1: No Action alternative: State acceptance indicates "yes". Shouldn't this be "no", or left blank?
12. Continue to update the DOH about future site activities.
13. Continue to provide DOH the results of future sampling, particularly for indoor air samples collected at the affected residences below the Bluff area.

REFERENCES

The Palermo Wellfield Superfund Site Draft Proposed Plan. EPA Region 10, May 1999.

Draft Remedial Investigation Report, Palermo Wellfield Superfund Site, Tumwater, Washington, February 1999.

CERTIFICATION

This Health Consultation for the Palermo Wellfield Superfund Site was prepared by the Washington State Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated.

Technical Project Officer
Superfund Site Assessment Branch (SSAB)
Division of Health Assessment and Consultation (DHAC)

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this Health Consultation and concurs with its findings.

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